



ALS Environmental
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March 26, 2018

Analytical Report for Service Request No: K1802038

Will Hafner
NewFields Environmental
115 2nd Ave N. Suite 100
Edmonds, WA 98020

RE: Yosemite Slough - San Francisco Bay

Dear Will,

Enclosed are the results of the sample(s) submitted to our laboratory March 06, 2018
For your reference, these analyses have been assigned our service request number **K1802038**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Service Request: K1802038
Date Received: 03/06/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 03/06/2018. The sample was received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry:

No significant anomalies were noted with this analysis.



Approved by _____

Date 03/26/2018



Chain of Custody

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COMMENTS:
* Report Lead only

PC MH

Cooler Receipt and Preservation Form

Client ADH Service Request K1802038
 Received: 3/6/18 Opened: 3/6/18 By: [Signature] Unloaded: 3/6/18 By: [Signature]

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.9	0.7	N/A	—	-0.2	387		7717 2459 4852	

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
 5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
 7. Were all sample labels complete (i.e. analysis, preservation, etc.)? NA Y N
 8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
 9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? Indicate in the table below NA Y N
 11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
 12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

SHORT HOLD TIME



General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water
Analysis Method: SM 2540 D
Prep Method: None

Service Request: K1802038
Date Collected: 03/1/18
Date Received: 03/6/18
Units: mg/L
Basis: NA

Solids, Total Suspended (TSS)

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
YSB-1803010412-000	K1802038-001	14.5	5.0	-	1	03/07/18 14:37	
Method Blank	K1802038-MB1	ND U	5.0	-	1	03/07/18 14:37	
Method Blank	K1802038-MB2	ND U	4.0	-	1	03/07/18 14:37	

ALS Group USA, Corp.

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QA/QC Report

Client: NewFields Environmental
Project Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Service Request: K1802038**Date Collected:** NA**Date Received:** NA**Date Analyzed:** 03/07/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name: Batch QC
Lab Code: K1801919-001

Units: mg/L**Basis:** NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1801919-001DUP	Average	RPD	RPD Limit
					Result			
Solids, Total Suspended (TSS)	SM 2540 D	5.0	-	ND U	ND U	NC	NC	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Service Request: K1802038
Date Analyzed: 03/07/18
Date Extracted: NA

Lab Control Sample Summary
Solids, Total Suspended (TSS)

Analysis Method: SM 2540 D
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 582841

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1802038-LCS	292	304	96	85-115

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Analytical Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water
Analysis Method: SM 5310 C
Prep Method: None

Service Request: K1802038
Date Collected: 03/1/18
Date Received: 03/6/18
Units: mg/L
Basis: NA

Carbon, Total Organic

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
YSB-1803010412-000	K1802038-001	4.76	0.50	0.07	1	03/08/18 17:14	
Method Blank	K1802038-MB1	ND U	0.50	0.07	1	03/08/18 00:30	

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QA/QC Report

Client: NewFields Environmental
Project Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Analysis Method: SM 5310 C
Prep Method: None

Service Request:K1802038
Date Collected:03/01/18
Date Received:03/06/18

Units:mg/L
Basis:NA

Replicate Sample Summary
Carbon, Total Organic

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
YSB-1803010412-000	K1802038-001DUP	0.50	0.07	4.76	4.72	4.74	<1	10	03/08/18

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Service Request: K1802038
Date Collected: 03/01/18
Date Received: 03/06/18
Date Analyzed: 03/8/18
Date Extracted: NA

**Matrix Spike Summary
Carbon, Total Organic**

Sample Name: YSB-1803010412-000
Lab Code: K1802038-001
Analysis Method: SM 5310 C
Prep Method: None

Units: mg/L
Basis: NA

**Matrix Spike
K1802038-001MS**

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	4.76	30.6	25.0	103	83-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay
Sample Matrix: Water

Service Request: K1802038
Date Analyzed: 03/08/18
Date Extracted: NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method: SM 5310 C
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 582867

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1802038-LCS	24.4	24.0	102	83-117

ALS Group USA, Corp.

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QA/QC Report

Client: NewFields Environmental**Service Request:** K1802038**Project:** Yosemite Slough - San Francisco Bay**Continuing Calibration Verification (CCV) Summary****Carbon, Total Organic****Analysis Method:** SM 5310 C**Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	582867	KQ1802986-37	03/07/18 23:57	25.0	25.3	101	90-110
CCV2	582867	KQ1802986-38	03/08/18 03:44	25.0	25.7	103	90-110
CCV3	582867	KQ1802986-39	03/08/18 09:19	25.0	25.5	102	90-110
CCV4	582867	KQ1802986-40	03/08/18 17:46	25.0	25.2	101	90-110
CCV5	582867	KQ1802986-41	03/09/18 00:08	25.0	25.6	102	90-110

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QA/QC Report

Client: NewFields Environmental
Project: Yosemite Slough - San Francisco Bay

Service Request:K1802038

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C**Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	MDL	Result	Q
CCB1	582867	KQ1802986-42	03/08/18 00:14	0.50	0.07	ND	U
CCB2	582867	KQ1802986-43	03/08/18 04:00	0.50	0.07	ND	U
CCB3	582867	KQ1802986-44	03/08/18 09:36	0.50	0.07	ND	U
CCB4	582867	KQ1802986-45	03/08/18 18:02	0.50	0.07	ND	U
CCB5	582867	KQ1802986-46	03/09/18 00:24	0.50	0.07	0.24	J



Raw Data

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General Chemistry

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K1450, K1444, K1408, K2030, K2035, K2038
 I I II II II IV
 Work Request # K1962, K1910, K1919, K1924, K1925, K1929, K1943, K1974
 Tier: IV I I II II I I I
 Date Analyzed: 3/7/18
 Analyst: AMO
 Analysis: TSS
 Run # 582841

DATA QUALITY REPORT INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

- | | |
|---|-------------------|
| 1. Is the method name and number correct and appropriate? | <u>yes</u> /no/NA |
| 2. Holding times met for all analyses and for all samples? | <u>yes</u> /no/NA |
| 3. Are calculations correct? | <u>yes</u> /no/NA |
| 4. Is the reporting basis correct? (Dry Weight) | yes/no/ <u>NA</u> |
| 5. All quality control criteria met? | <u>yes</u> /no |
| 6. Is the calibration curve correlation coefficient ≥ 0.995 ? | yes/no/ <u>NA</u> |
| 7. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | <u>yes</u> /no/NA |
| 8. Are ICVs, CCVs, and CCBs all within acceptance limits? | <u>yes</u> /no/NA |
| 9. Are results for methods blanks all ND? | <u>yes</u> /no/NA |
| 10. Are all QC samples within acceptance criteria?
(LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | <u>yes</u> /no/NA |
| 11. Are all exceptions explained? | yes/no/ <u>NA</u> |
| 12. Have all applicable service requests been reviewed? | <u>yes</u> /no/NA |
| 13. Are all samples labeled correctly? | <u>yes</u> /no/NA |
| 14. Have all instructions on the service request been followed?
(e.g. Special MRLs, QC on a specific sample, Form V) | <u>yes</u> /no/NA |
| 15. Are detection limits and units reported correctly? | <u>yes</u> /no/NA |
| 16. Is the unused space on the benchsheet crossed out? | <u>yes</u> /no/NA |
| 17. Was analysis turned in by the due date? (n-2) (If not record SR#) | <u>yes</u> /no/NA |

COMMENTS:

Final Approved by: *Frankie*

Date: 03/12/18

DQREPORT

Analytical Results Summary

Instrument Name: K-Balance-31

Analyst: AMOONEY

Analysis Lot:

582841

Method/Testcode: SM 2540 D/TSS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
K1801902-002	Solids, Total Suspended (TSS)	N/A		Water	4.50 mg/L	200 mL	5.0 mg/L U	1		5.0			3/7/18 14:37	N IV
K1801910-001	Solids, Total Suspended (TSS)	N/A		Water	16.00 mg/L	100 mL	16 mg/L	1		10			3/7/18 14:37	N I
K1801919-001	Solids, Total Suspended (TSS)	N/A		Water	0.50 mg/L	200 mL	5.0 mg/L U	1		5.0			3/7/18 14:37	N I
K1801924-001	Solids, Total Suspended (TSS)	N/A		Water	65.00 mg/L	100 mL	65 mg/L	1		10			3/7/18 14:37	N II
K1801925-001	Solids, Total Suspended (TSS)	N/A		Water	15.00 mg/L	200 mL	15.0 mg/L	1		5.0			3/7/18 14:37	N II
K1801929-001	Solids, Total Suspended (TSS)	N/A		Water	3.00 mg/L	200 mL	5.0 mg/L U	1		5.0			3/7/18 14:37	N I
K1801943-004	Solids, Total Suspended (TSS)	N/A		Water	14.00 mg/L	150 mL	14.0 mg/L	1		6.7			3/7/18 14:37	N I
K1801943-005.R01	Solids, Total Suspended (TSS)	N/A		Water	55.00 mg/L	100 mL	55 mg/L	1		10			3/7/18 14:37	N I
K1801943-006	Solids, Total Suspended (TSS)	N/A		Water	164.00 mg/L	25 mL	164 mg/L	1		40			3/7/18 14:37	N I
K1801974-001	Solids, Total Suspended (TSS)	N/A		Water	438.00 mg/L	50 mL	438 mg/L	1		20			3/7/18 14:37	N I
K1801974-002	Solids, Total Suspended (TSS)	N/A		Water	94.00 mg/L	50 mL	94 mg/L	1		20			3/7/18 14:37	N I
K1801974-003	Solids, Total Suspended (TSS)	N/A		Water	62.00 mg/L	50 mL	62 mg/L	1		20			3/7/18 14:37	N I
K1801974-004	Solids, Total Suspended (TSS)	N/A		Water	14.00 mg/L	50 mL	20 mg/L U	1		20			3/7/18 14:37	N I
K1801995-001	Solids, Total Suspended (TSS)	N/A		Water	3.00 mg/L	200 mL	5.0 mg/L U	1		5.0			3/7/18 14:37	N I
K1801999-001	Solids, Total Suspended (TSS)	N/A		Water	6.00 mg/L	200 mL	6.0 mg/L	1		5.0			3/7/18 14:37	N I
K1801999-002	Solids, Total Suspended (TSS)	N/A		Water	14.00 mg/L	200 mL	14.0 mg/L	1		5.0			3/7/18 14:37	N I
K1802008-001	Solids, Total Suspended (TSS)	N/A		Water	80.00 mg/L	50 mL	80 mg/L	1		20			3/7/18 14:37	N II
K1802030-001	Solids, Total Suspended (TSS)	N/A		Water	0.40 mg/L	250 mL	4.0 mg/L U	1		4.0			3/7/18 14:37	N II
K1802035-001	Solids, Total Suspended (TSS)	N/A		Water	0.40 mg/L	250 mL	4.0 mg/L U	1		4.0			3/7/18 14:37	N II
K1802038-001	Solids, Total Suspended (TSS)	N/A		Water	14.50 mg/L	200 mL	14.5 mg/L	1		5.0			3/7/18 14:37	N IV
KQ1802969-01	Solids, Total Suspended (TSS)	DUP	K1802030-001	Water	0.80 mg/L	250 mL	4.0 mg/L U	1		4.0		NC	3/7/18 14:37	N II
KQ1802969-02	Solids, Total Suspended (TSS)	DUP	K1801919-001	Water	0.00 mg/L	200 mL	5.0 mg/L U	1		5.0		NC	3/7/18 14:37	N I
KQ1802969-03	Solids, Total Suspended (TSS)	MB		Water	0.00 mg/L	200 mL	5.0 mg/L U	1		5.0			3/7/18 14:37	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 3/9/18 16:08

Results Summary

03/12/18
Hawley

Analytical Results Summary

Instrument Name: K-Balance-31 Analyst: AMOONEY Analysis Lot: 582841 Method/Testcode: SM 2540 D/TSS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
KQ1802969-03	Solids, Total Suspended (TSS)	MB		Water	0.00 mg/L	200 mL	5.0 mg/L	1		5.0			3/7/18 14:37	N IV
KQ1802969-04	Solids, Total Suspended (TSS)	MB		Water	0.00 mg/L	250 mL	4.0 mg/L	1		4.0			3/7/18 14:37	N IV
KQ1802969-04	Solids, Total Suspended (TSS)	MB		Water	0.00 mg/L	250 mL	4.0 mg/L	1		4.0			3/7/18 14:37	N IV
KQ1802969-05	Solids, Total Suspended (TSS)	LCS		Water	292.00 mg/L	50 mL	292 mg/L	1		20	96		3/7/18 14:37	N IV
KQ1802969-05	Solids, Total Suspended (TSS)	LCS		Water	292.00 mg/L	50 mL	292 mg/L	1		20	96		3/7/18 14:37	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Analysis:

Total Suspended Solids

Method: EPA SM 2540 D

Sample #	Row #	Pan Number	Comments	Sample Volume (ml)	Wt. Filter + Dry sample (1) (g)	Wt. Filter + Dry sample (2) (g)	Wt. Filter + Dry sample (3) (g)	Wt. Filter (g)	Wt. Dry Sample (g)	TSS (mg/L)	TSS (mg/L) reported	Constant Weight?
MB	1	T33087		200	0.1010	0.1011		0.1010	0.0000	0.00	ND	Y
MB	2	T33086		250	0.1012	0.1012		0.1012	0.0000	0.00	ND	Y
LCS	3	T33085		50	0.1153	0.1153		0.1007	0.0146	292.00	292.0	Y
K1801902-002	4	T33084		200	0.1015	0.1015		0.1006	0.0009	4.50	ND	Y
K1801919-001	5	T33083		200	0.1020	0.1019		0.1019	0.0001	0.50	ND	Y
K1801910-001	6	T33082		100	0.1009	0.1013		0.0993	0.0016	16.00	16.0	Y
K1801924-001	7	T33081		100	0.1058	0.1056		0.0993	0.0065	65.00	65.0	Y
K1801925-001	8	T33080		200	0.1050	0.1053		0.1020	0.0030	15.00	15.0	Y
K1801929-001	9	T33079		200	0.1023	0.1024		0.1017	0.0006	3.00	ND	Y
K1801974-001	10	T33078		50	0.1212	0.1213		0.0993	0.0219	438.00	438.0	Y
K1801974-002	11	T33077		50	0.1046	0.1050		0.0999	0.0047	94.00	94.0	Y
K1801974-003	12	T33075		50	0.1050	0.1051		0.1019	0.0031	62.00	62.0	Y
K1801974-004	13	T33074		50	0.1016	0.1020		0.1009	0.0007	14.00	ND	Y
K1801995-001	14	T33073		200	0.1032	0.1036		0.1026	0.0006	3.00	ND	Y
K1802038-001	15	T33072		200	0.1029	0.1029		0.1000	0.0029	14.50	14.5	Y
K1802030-001	16	T33071	LLCA	250	0.1011	0.1015		0.1010	0.0001	0.40	ND	Y
K1802035-001	17	T33069	LLCA	250	0.0991	0.0995		0.0990	0.0001	0.40	ND	Y
K1801943-004	18	T33068	notify >50	150	0.1043	0.1045		0.1022	0.0021	14.00	14.0	Y
K1801943-005	19	T33067	notify >50	100	0.1059	0.1062		0.1004	0.0055	55.00	55.0	Y
K1801943-006	20	T33066		25	0.1044	0.1047		0.1003	0.0041	164.00	164.0	Y
K1801999-001	21	T33065		200	0.1020	0.1024		0.1008	0.0012	6.00	6.0	Y
K1801999-002	22	T33064		200	0.1051	0.1053		0.1023	0.0028	14.00	14.0	Y
K1802008-001	23	T33063		50	0.1061	0.1065		0.1021	0.0040	80.00	80.0	Y
K1802030-001D	24	T33062	LLCA	250	0.1016	0.1017		0.1014	0.0002	0.80	ND	Y
K1801919-001D	25	T33061		200	0.1024	0.1025		0.1024	0.0000	0.00	ND	Y

Calculation: Suspended Solids (mg/L) = Wt. Dry Sample (g) x 1000 x 1000 / Volume (ml)

K-Balance 31 105 oven: K - OVEN 06

ERA #:4033	Lot#	200118	ID# TDS/12-Gen-	11-23-C	T.V. =	306	Filter Lot #	2479
Wt (1) Start	15:19	03/07/18	Wt (2) S	13:15	03/09/18	Wt (3) Start	Thermometer: Oven digital	
Stop	11:27	03/09/18	S	15:24	03/09/18	Stop		
Wt (1) Start	105		Wt (2) S	105		Wt (3) Start		
Temp Stop	105		Temp S	105		Temp Stop		

Wt (4) Start		Wt (5) Start		Wt (6) Start	
Stop		Stop		Stop	
Wt (4) Start		Wt (5) Start		Wt (6) Start	
Temp Stop		Temp Stop		Temp Stop	

Analyzed By: AM	Date Analyzed: 03/07/18 14:37
Reviewed By: <i>Houm</i>	Date Reviewed: 03/12/18

rev 12-04-18

ALS ENVIRONMENTAL

Analysis: Total Suspended Solids Method: EPA SM 2540 D

CCV Verification SN: 67095

1 st weigh	1.0000 g	≤(+/- 0.1%)	2 nd weigh	0.0100 g	≤(+/- 0.1%)	3 rd weigh	1.0000 g	≤(+/- 0.1%)	4 rd weigh	0.0100 g
CCV1	1.0000	100.00%	CCV2	0.0101	101.00%	CCV5	1.0000	100.00%	CCV6	0.0101
Date/time	03/09/18 13:00		Date/time	03/09/18 13:00		Date/time	03/09/18 15:45		Date/time	03/09/18 15:45
CCV3	1.0000	100.00%	CCV4	0.0100	100.00%	CCV7	1.0000	100.00%	CCV8	0.0102
Date/time	03/09/18 13:15		Date/time	03/09/18 13:15		Date/time	03/09/18 15:55		Date/time	03/09/18 15:55

1 st weigh	1.0000 g	≤(+/- 0.1%)	2 nd weigh	0.0100 g	≤(+/- 0.1%)	3 rd weigh	1.0000 g	≤(+/- 0.1%)	4 rd weigh	0.0100 g
CCV9		0.00%	CCV10		0.00%	CCV13		0.00%	CCV14	
Date/time			Date/time			Date/time			Date/time	
CCV11		0.00%	CCV12		0.00%	CCV15		0.00%	CCV16	
Date/time			Date/time			Date/time			Date/time	

1 st weigh	1.0000 g	≤(+/- 0.1%)	2 nd weigh	0.0100 g	≤(+/- 0.1%)	3 rd weigh	1.0000 g	≤(+/- 0.1%)	4 rd weigh	0.0100 g
CCV		0.00%	CCV		0.00%	CCV		0.00%	CCV	
Date/time			Date/time			Date/time			Date/time	
CCV		0.00%	CCV		0.00%	CCV		0.00%	CCV	
Date/time			Date/time			Date/time			Date/time	

1 st weigh	1.0000 g	≤(+/- 0.1%)	2 nd weigh	0.0100 g	≤(+/- 0.1%)	3 rd weigh	1.0000 g	≤(+/- 0.1%)	4 rd weigh	0.0100 g
CCV		0.00%	CCV		0.00%	CCV		0.00%	CCV	
Date/time			Date/time			Date/time			Date/time	
CCV		0.00%	CCV		0.00%	CCV		0.00%	CCV	
Date/time			Date/time			Date/time			Date/time	

CCV Verification SN: 6549

1 st weigh	1.0000 g	≤(+/- 0.5%)	2 nd weigh	0.0100 g	≤(+/- 0.5%)	3 rd weigh	1.0000 g	≤(+/- 0.5%)	4 th weigh	0.0100 g
CCV1		0.00%	CCV2		0.00%	CCV5		0.00%	CCV6	
CCV3		0.00%	CCV4		0.00%	CCV7		0.00%	CCV8	

Analyzed By: AM	Date Analyzed: 03/07/18 14:37
Reviewed By: 	Date Reviewed: 03/12/18

Work Request # K1802076, 1755, 1735, 2025, 1917, 2038, 2006, 1267
Tier: II II II II IV IV II IV
Date Analyzed: 3/7/18
Analyst: CES Run # TOC/DOC
Analysis: TOC/DOC 582867
582868

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? (yes/no/NA)
2. Holding times met for all analyses and for all samples? (yes/no/NA)
3. Are calculations correct? (yes/no/NA)
4. Is the reporting basis correct? (Dry Weight) (yes/no/NA)
5. All quality control criteria met? yes/no
6. Is the calibration curve correlation coefficient ≥ 0.995 ? (yes/no/NA)
7. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? (yes/no/NA)
8. Are ICVs, CCVs, and CCBs all within acceptance limits? (yes/no/NA)
9. Are results for methods blanks all ND? (yes/no/NA)
10. Are all QC samples within acceptance criteria?
(LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
11. Are all exceptions explained? (yes/no/NA)
12. Have all applicable service requests been reviewed? (yes/no/NA)
13. Are all samples labeled correctly? (yes/no/NA)
14. Have all instructions on the service request been followed?
(e.g. Special MRLs, QC on a specific sample, Form V) (yes/no/NA)
15. Are detection limits and units reported correctly? (yes/no/NA)
16. Is the unused space on the benchsheet crossed out? (yes/no/NA)
17. Was analysis turned in by the due date? (n-2) (If not record SR#) (yes/no/NA)

COMMENTS:

1267-17 MS % R not within acceptance limits
- pore water samples.

RA 2006-2 DOC - carry over.

Final Approved by: Humpy Date: 03/13/18
DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03

Analyst: CSETHE

Analysis Lot:

582867

Method/Testcode: SM 5310 C/TOC T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
K1801735-001	Carbon, Total Organic	N/A		Water	2.47 mg/L	10 ml	123 mg/L	50	4	25			3/8/18 04:49	N II
K1801755-008	Carbon, Total Organic	N/A		Water	0.05 mg/L	10 ml	0.50 mg/L	1	0.07	0.50			3/8/18 04:17	N II
K1801917-001	Carbon, Total Organic	N/A		Water	1.51 mg/L	10 ml	1.51 mg/L	1	0.07	0.50			3/8/18 07:28	N IV
K1801917-002	Carbon, Total Organic	N/A		Water	2.46 mg/L	10 ml	2.46 mg/L	1	0.07	0.50			3/8/18 10:25	N IV
K1801917-003	Carbon, Total Organic	N/A		Water	1.97 mg/L	10 ml	1.97 mg/L	1	0.07	0.50			3/8/18 11:28	N IV
K1801917-004	Carbon, Total Organic	N/A		Water	1.55 mg/L	10 ml	1.55 mg/L	1	0.07	0.50			3/8/18 12:31	N IV
K1801917-005	Carbon, Total Organic	N/A		Water	0.77 mg/L	10 ml	0.77 mg/L	1	0.07	0.50			3/8/18 13:34	N IV
K1801917-006	Carbon, Total Organic	N/A		Water	1.40 mg/L	10 ml	1.40 mg/L	1	0.07	0.50			3/8/18 14:37	N IV
K1801917-007	Carbon, Total Organic	N/A		Water	1.48 mg/L	10 ml	1.48 mg/L	1	0.07	0.50			3/8/18 15:39	N IV
K1802025-001	Carbon, Total Organic	N/A		Water	1.18 mg/L	10 ml	1.18 mg/L	1	0.07	0.50			3/8/18 05:37	N II
K1802025-002	Carbon, Total Organic	N/A		Water	1.45 mg/L	10 ml	1.45 mg/L	1	0.07	0.50			3/8/18 06:25	N II
K1802025-003	Carbon, Total Organic	N/A		Water	1.97 mg/L	10 ml	1.97 mg/L	1	0.07	0.50			3/8/18 06:57	N II
K1802038-001	Carbon, Total Organic	N/A		Water	4.76 mg/L	10 ml	4.76 mg/L	1	0.07	0.50			3/8/18 17:14	N IV
K1802076-001	Carbon, Total Organic	N/A		Water	5.90 mg/L	10 ml	118 mg/L	20	2	10			3/8/18 01:53	N II
K1802076-002	Carbon, Total Organic	N/A		Water	2.48 mg/L	10 ml	50 mg/L	20	2	10			3/8/18 03:12	N II
K1802986-01	Carbon, Total Organic	MS	K1802076-001	Water	31.62 mg/L	10 ml	632 mg/L	20	2	10	103		3/8/18 02:24	N II
K1802986-02	Carbon, Total Organic	DUP	K1802076-001	Water	5.61 mg/L	10 ml	112 mg/L	20	2	10		5	3/8/18 01:53	N II
K1802986-03	Carbon, Total Organic	DUP	K1802076-002	Water	2.33 mg/L	10 ml	47 mg/L	20	2	10		6	3/8/18 03:12	N II
K1802986-04	Carbon, Total Organic	DUP	K1801755-008	Water	0.06 mg/L	10 ml	0.50 mg/L	1	0.07	0.50		NC	3/8/18 04:17	N II
K1802986-05	Carbon, Total Organic	MS	K1801735-001	Water	28.75 mg/L	10 ml	1440 mg/L	50	4	25	105		3/8/18 05:21	N II
K1802986-06	Carbon, Total Organic	DUP	K1801735-001	Water	2.27 mg/L	10 ml	114 mg/L	50	4	25		8	3/8/18 04:49	N II
K1802986-07	Carbon, Total Organic	MS	K1802025-001	Water	26.58 mg/L	10 ml	26.6 mg/L	1	0.07	0.50	102		3/8/18 06:09	N II
K1802986-08	Carbon, Total Organic	DUP	K1802025-001	Water	0.98 mg/L	10 ml	0.98 mg/L	1	0.07	0.50		19	3/8/18 05:37	N II
K1802986-09	Carbon, Total Organic	DUP	K1802025-002	Water	1.20 mg/L	10 ml	1.20 mg/L	1	0.07	0.50		19	3/8/18 06:25	N II
K1802986-10	Carbon, Total Organic	DUP	K1802025-003	Water	1.90 mg/L	10 ml	1.90 mg/L	1	0.07	0.50		4	3/8/18 06:57	N II
K1802986-11	Carbon, Total Organic	MS	K1801917-001	Water	27.29 mg/L	10 ml	27.3 mg/L	1	0.07	0.50	103		3/8/18 08:31	N IV
K1802986-12	Carbon, Total Organic	DUP	K1801917-001	Water	1.43 mg/L	10 ml	1.43 mg/L	1	0.07	0.50		5	3/8/18 07:28	N IV
K1802986-13	Carbon, Total Organic	TRP	K1801917-001	Water	1.36 mg/L	10 ml	1.36 mg/L	1	0.07	0.50		5	3/8/18 07:28	N IV
K1802986-14	Carbon, Total Organic	QUAD	K1801917-001	Water	1.34 mg/L	10 ml	1.34 mg/L	1	0.07	0.50		6	3/8/18 07:28	N IV
K1802986-15	Carbon, Total Organic	DUP	K1801917-002	Water	2.25 mg/L	10 ml	2.25 mg/L	1	0.07	0.50		9	3/8/18 10:25	N IV
K1802986-16	Carbon, Total Organic	TRP	K1801917-002	Water	2.27 mg/L	10 ml	2.27 mg/L	1	0.07	0.50		5	3/8/18 10:25	N IV
K1802986-17	Carbon, Total Organic	QUAD	K1801917-002	Water	2.21 mg/L	10 ml	2.21 mg/L	1	0.07	0.50		5	3/8/18 10:25	N IV
K1802986-18	Carbon, Total Organic	DUP	K1801917-003	Water	1.91 mg/L	10 ml	1.91 mg/L	1	0.07	0.50		3	3/8/18 11:28	N IV
K1802986-19	Carbon, Total Organic	TRP	K1801917-003	Water	1.88 mg/L	10 ml	1.88 mg/L	1	0.07	0.50		2	3/8/18 11:28	N IV
K1802986-20	Carbon, Total Organic	QUAD	K1801917-003	Water	1.77 mg/L	10 ml	1.77 mg/L	1	0.07	0.50		4	3/8/18 11:28	N IV
K1802986-21	Carbon, Total Organic	DUP	K1801917-004	Water	1.49 mg/L	10 ml	1.49 mg/L	1	0.07	0.50		4	3/8/18 12:31	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

03/12/18
The Lab

CES 3/12/18

Analytical Results Summary

Instrument Name: K-TOC-03

Analyst: CSETHE

Analysis Lot:

582867

Method/Testcode: SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC? Tier
KQ1802986-42	Carbon, Total Organic	CCB		Water	-0.10 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 00:14	N II
KQ1802986-43	Carbon, Total Organic	CCB		Water	0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 04:00	N II
KQ1802986-43	Carbon, Total Organic	CCB		Water	0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 04:00	N II
KQ1802986-43	Carbon, Total Organic	CCB		Water	0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 04:00	N II
KQ1802986-43	Carbon, Total Organic	CCB		Water	0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 04:00	N II
KQ1802986-44	Carbon, Total Organic	CCB		Water	-0.01 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 09:36	N II
KQ1802986-44	Carbon, Total Organic	CCB		Water	-0.01 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 09:36	N II
KQ1802986-44	Carbon, Total Organic	CCB		Water	-0.01 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 09:36	N II
KQ1802986-44	Carbon, Total Organic	CCB		Water	-0.01 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 09:36	N II
KQ1802986-45	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 18:02	N II
KQ1802986-45	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 18:02	N II
KQ1802986-45	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 18:02	N II
KQ1802986-46	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			3/8/18 18:02	N II
KQ1802986-46	Carbon, Total Organic	CCB		Water	0.24 mg/L	10 ml	0.24 mg/L J	1	0.07	0.50			3/9/18 00:24	N II
KQ1802986-46	Carbon, Total Organic	CCB		Water	0.24 mg/L	10 ml	0.24 mg/L J	1	0.07	0.50			3/9/18 00:24	N II
KQ1802986-46	Carbon, Total Organic	CCB		Water	0.24 mg/L	10 ml	0.24 mg/L J	1	0.07	0.50			3/9/18 00:24	N II
KQ1802986-47	Carbon, Total Organic	LODV		Water	0.17 mg/L	10 ml	0.17 mg/L J	1	0.07	0.50			3/8/18 01:20	N II
KQ1802986-47	Carbon, Total Organic	LODV		Water	0.17 mg/L	10 ml	0.17 mg/L J	1	0.07	0.50			3/8/18 01:20	N II
KQ1802986-48	Carbon, Total Organic	LOQV		Water	0.47 mg/L	10 ml	0.47 mg/L J	1	0.07	0.50			3/8/18 01:36	N II
KQ1802986-48	Carbon, Total Organic	LOQV		Water	0.47 mg/L	10 ml	0.47 mg/L J	1	0.07	0.50			3/8/18 01:36	N II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03

Analyst: CSETHE

Analysis Lot:

582868

Method/Testcode: 9060/TOC D

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC? Tier
1801267-008	Carbon, Dissolved Organic N/A (DOC)			Water	5.47 mg/L	10 ml	5.47 mg/L	1	0.07	0.50			3/8/18 21:30	N IV
1801267-017	Carbon, Dissolved Organic N/A (DOC)			Water	7.85 mg/L	10 ml	7.85 mg/L	1	0.07	0.50			3/8/18 22:33	N IV
1802006-001	Carbon, Dissolved Organic N/A (DOC)			Water	14.96 mg/L	10 ml	59.8 mg/L	4	0.3	2.0			3/8/18 19:39	N II
1802006-002	Carbon, Dissolved Organic N/A (DOC)			Water	1.71 mg/L	10 ml	1.71 mg/L	1	0.07	0.50			3/8/18 20:42	N II
Q1802987-01	Carbon, Dissolved Organic DUP (DOC)		K1802006-001	Water	15.21 mg/L	10 ml	60.9 mg/L	4	0.3	2.0		2	3/8/18 19:39	N II
Q1802987-02	Carbon, Dissolved Organic MS (DOC)		K1802006-002	Water	27.21 mg/L	10 ml	27.2 mg/L	1	0.07	0.50	102		3/8/18 21:14	N II
Q1802987-03	Carbon, Dissolved Organic DUP (DOC)		K1802006-002	Water	1.49 mg/L	10 ml	1.49 mg/L	1	0.07	0.50		14*	3/8/18 20:42	N II
Q1802987-04	Carbon, Dissolved Organic MB (DOC)			Water	1.36000000000003E-06	10 ml	0.50 mg/L	1	0.07	0.50			3/8/18 09:52	N II
Q1802987-05	Carbon, Dissolved Organic LCS (DOC)			Water	24.27 mg/L	10 ml	24.3 mg/L	1	0.07	0.50	101		3/8/18 10:09	N II
Q1802987-06	Carbon, Dissolved Organic CCV (DOC)			Water	25.55 mg/L	10 ml	25.5 mg/L	1			102		3/8/18 09:19	N II
Q1802987-07	Carbon, Dissolved Organic CCV (DOC)			Water	25.24 mg/L	10 ml	25.2 mg/L	1			101		3/8/18 17:46	N II
Q1802987-08	Carbon, Dissolved Organic CCV (DOC)			Water	25.59 mg/L	10 ml	25.6 mg/L	1			102		3/9/18 00:08	N II
Q1802987-09	Carbon, Dissolved Organic CCB (DOC)			Water	-0.01 mg/L	10 ml	0.50 mg/L	1	0.07	0.50			3/8/18 09:36	N II
Q1802987-10	Carbon, Dissolved Organic CCB (DOC)			Water	-0.02 mg/L	10 ml	0.50 mg/L	1	0.07	0.50			3/8/18 18:02	N II
Q1802987-11	Carbon, Dissolved Organic CCB (DOC)			Water	0.24 mg/L	10 ml	0.24 mg/L	1	0.07	0.50			3/9/18 00:24	N II
Q1802987-12	Carbon, Dissolved Organic DUP (DOC)		K1801267-008	Water	5.35 mg/L	10 ml	5.35 mg/L	1	0.07	0.50		2	3/8/18 21:30	N IV
Q1802987-13	Carbon, Dissolved Organic TRP (DOC)		K1801267-008	Water	5.57 mg/L	10 ml	5.57 mg/L	1	0.07	0.50		2	3/8/18 21:30	N IV
Q1802987-14	Carbon, Dissolved Organic QUAD (DOC)		K1801267-008	Water	5.55 mg/L	10 ml	5.55 mg/L	1	0.07	0.50		2	3/8/18 21:30	N IV
Q1802987-15	Carbon, Dissolved Organic MS (DOC)		K1801267-017	Water	22.40 mg/L	10 ml	22.4 mg/L	1	0.07	0.50	58*		3/9/18 00:40	N IV
Q1802987-16	Carbon, Dissolved Organic DUP (DOC)		K1801267-017	Water	7.88 mg/L	10 ml	7.88 mg/L	1	0.07	0.50		<1	3/8/18 22:33	N IV
Q1802987-17	Carbon, Dissolved Organic TRP (DOC)		K1801267-017	Water	7.83 mg/L	10 ml	7.83 mg/L	1	0.07	0.50		<1	3/8/18 22:33	N IV
Q1802987-18	Carbon, Dissolved Organic QUAD (DOC)		K1801267-017	Water	7.55 mg/L	10 ml	7.55 mg/L	1	0.07	0.50		2	3/8/18 22:33	N IV
Q1802987-19	Carbon, Dissolved Organic CCV (DOC)			Water	25.29 mg/L	10 ml	25.3 mg/L	1					3/9/18 01:29	N II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 3/12/18 17:43

Results Summary

03/12/18
CSE
for review

CES/3/12/18

Analytical Results Summary

Instrument Name: K-TOC-03			Analyst: CSETHE			Analysis Lot: 582868			Method/Testcode: SM 5310 C/TOC D					
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC? Tier
Q1802987-19	Carbon, Dissolved Organic CCB (DOC)			Water	25.29 mg/L	10 ml	25.3 mg/L	1			101		3/9/18 01:29	N II
Q1802987-20	Carbon, Dissolved Organic CCB (DOC)			Water	0.20 mg/L	10 ml	0.19 mg/L	1	0.07	0.50			3/9/18 01:45	N II
Q1802987-20	Carbon, Dissolved Organic CCB (DOC)			Water	0.20 mg/L	10 ml	0.19 mg/L	1	0.07	0.50			3/9/18 01:45	N II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

TOC: 582867

DOC: 582868

Schedule: 03072018B

Version: 6

Instrument: Fusion1

Last Saved by: Fusion1 (Fusion1)

Last Saved on: 2018/03/08 22:39 - Thursday

03/13/18
Thur

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps
(Clean)	Clean	Clean		1
(Clean)	Clean	Clean		1
(Clean)	Clean	Clean		1
(Blank)	Blank	Reagent/Acid Blank		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
1	Sample	MB1	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [24.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
3	Sample	ICS	Extended Reaction 021711 (Extended Reaction 021711)	1
4	Sample	LOD	Extended Reaction 021711 (Extended Reaction 021711)	1
5	Sample	LOQ	Extended Reaction 021711 (Extended Reaction 021711)	1
6	Sample	K1802076-001.01 20x	Extended Reaction 021711 (Extended Reaction 021711)	2
7	Sample	K1802076-001.01 ms 20x	Extended Reaction 021711 (Extended Reaction 021711)	1
8	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
9	Sample	K1802076-002.01 20x	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
10	Sample	K1801755-008.05	Extended Reaction 021711 (Extended Reaction 021711)	2
11	Sample	K1801735-001.02 50x	Extended Reaction 021711 (Extended Reaction 021711)	2
12	Sample	K1801735-001.02 ms 50x	Extended Reaction 021711 (Extended Reaction 021711)	1
13	Sample	K1802025-001.03	Extended Reaction 021711 (Extended Reaction 021711)	2
14	Sample	K1802025-001.03 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
15	Sample	K1802025-002.03	Extended Reaction 021711 (Extended Reaction 021711)	2
16	Sample	K1802025-003.04	Extended Reaction 021711 (Extended Reaction 021711)	2
17	Sample	K1801917-001.13	Extended Reaction 021711 (Extended Reaction 021711)	4
18	Sample	K1801917-001.13 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
19	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
20	Sample	MB2	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [24.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
21	Sample	K1801917-002.13	Extended Reaction 021711 (Extended Reaction 021711)	4
22	Sample	K1801917-003.13	Extended Reaction 021711 (Extended Reaction 021711)	4
23	Sample	K1801917-004.13	Extended Reaction 021711 (Extended Reaction 021711)	4
24	Sample	K1801917-005.13	Extended Reaction 021711 (Extended Reaction 021711)	4
25	Sample	K1801917-006.13	Extended Reaction 021711 (Extended Reaction 021711)	4
26	Sample	K1801917-007.13	Extended Reaction 021711 (Extended Reaction 021711)	4
27	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
28	Sample	K1802038-001.02	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
29	Sample	K1802038-001.02 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
30	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
31	Sample	FB 3/5/18	Extended Reaction 021711 (Extended Reaction 021711)	2
32	Sample	K1802006-001 doc 4x	Extended Reaction 021711 (Extended Reaction 021711)	2
33	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
34	Sample	K1802006-002 doc	Extended Reaction 021711 (Extended Reaction 021711)	2
35	Sample	K1802006-002 ms doc	Extended Reaction 021711 (Extended Reaction 021711)	1
36	Sample	K1801267-008.10 doc	Extended Reaction 021711 (Extended Reaction 021711)	4
37	Sample	K1801267-017.04 doc	Extended Reaction 021711 (Extended Reaction 021711)	4
38	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1

Printed on: March 12, 2018 14:44:43

Page 1

Schedule: 03072018B

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps
39	Sample	K1801267-017.04 ms doc	Extended Reaction 021711 (Extended Reaction 021711)	1
40	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1

0.418				OBSERVATIONS	8	BELOW
0.508	0.508	0.508	0.508	STD Deviation	0.11313	0.5077
0.540	0.540	0.540	0.540	AVERAGE	0.55528	0.5395
0.507	0.507	0.507	0.507	UCL	0.66841	0.507
0.515	0.515	0.515	0.515	LCL	0.44214	0.5147
0.498	0.498	0.498	0.498			0.4978
0.749						ABOVE
0.708				OBSERVATIONS	5	ABOVE
				STD Deviation	0.17225	BELOW
				AVERAGE	0.51334	BELOW
				UCL	0.68559	BELOW
				LCL	0.34109	BELOW
						BELOW
				OBSERVATIONS	5	BELOW
				STD Deviation	0.17225	BELOW
				AVERAGE	0.51334	BELOW
				UCL	0.68559	BELOW
				LCL	0.34109	BELOW
						BELOW
				OBSERVATIONS	5	BELOW
				STD Deviation	0.01767	BELOW
				AVERAGE	0.51334	BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW

03/13/18
[Signature]

ICAL Date 7/24/17

ICAL ID: 11-GEN-05-59A

LCS = 24.0 ppm APG 4013 Lot: 010615 (Ref: 11-GEN-05-63J)

CCV = 25.0 ppm (Ref: 11-GEN-05-64C)

Spike: 0.05 ml of 5000 ppm stock ----> 10.0 ml = 25.0 ppm x Dilution Factor (Ref: 11-GEN-05-63C)

ICS TV = 25.0 ppm %Rec=4

ICS ID: 11-GEN-05-63E

Date: 3/7/18

Fusion Report - 03072018B

Wednesday, March 07, 2018 10:15 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2018/03/12 14:45 - Monday

Report Summary Information

Company Location: Gen Chem Lab
Schedule Name: 03072018B
Instrument Name: Fusion1
Report Version: 1 of 1
Report Creation by Operators (schedule version): Fusion1 (Fusion1) (v1)
Fusion1 (Fusion1) (v3)
Fusion1 (Fusion1) (v5)
Fusion1 (Fusion1) (v6)
Comment:

Engine Version: 1.1.5.1
Firmware Version: 1.2.0696
Connection: RS232 COM1

Report Results

03/13/18
[Signature]

Sample Type: Clean

From Schedule Version 1

Pos	Analysis Type	Sample ID			Start Time	
◆ (clean)		Clean			2018/03/07 22:15	
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	11.54	16.85	5.31	46.85	08:00
2	TC Clean	5.86	8.38	2.53	49.42	07:17
3	TC Clean	2.57	5.08	2.51	49.48	07:00
4	TC Clean	1.94	4.64	2.71	49.56	07:04

Sample Type: Blank (Creating v1092)

From Schedule Version 1

Pos	Analysis Type	Sample ID			Start Time	
◆ (blank)		Reagent/Acid Blank			2018/03/07 22:49	
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.82	3.46	2.63	46.64	08:00
2	TC Clean	3.74	6.36	2.62	49.54	07:17
3	TC Clean	2.50	5.17	2.67	49.53	07:02

4	TC Clean	2.55	5.38	2.83	49.49	07:03
5	Reagent Blank	6.26	8.90	2.64	49.48	08:13
6	Acid Blank	1.72	4.08	2.36	46.40	08:01

Sample Type: Sample

From Schedule Version 1

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
D	TOC	RB	0.8035 ppm	0.0000 ppm	0.0000%	2018/03/07 23:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8035	8.0345	17.33	20.12	2.79	49.55	12:29

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)Sample Type: Check Standard --> CCV 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	25.8631 ppm (PASS)	0.0000 ppm	0%	2018/03/07 23:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.8631	258.6309	200.64	203.22	2.58	49.55	12:28

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos B

50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.4181 ppm (PASS)	0.0000 ppm	0%	2018/03/08 00:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.4181	4.1807	15.33	17.98	2.65	49.51	12:31

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos D

0 ppmC

Sample Type: Sample

From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time		
◆	1	TOC	MB1	0.5077 ppm	0.0000 ppm	0.0000%	2018/03/08 00:30		
Rep #	Base Analysis Type		ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC		0.5077	5.0768	15.17	17.75	2.58	49.52	12:33
<u>Dilution</u>		<u>Blank Contribution</u>		<u>Method</u>	<u>Calibration</u>				
1:10		(TC) 11.4746 (IC) (v1092)		Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)				

Sample Type: Check Standard --> LCS ER

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
* 2	TOC	24.0000	1:1	[TOC] LCS ER [24.0 ppm]	0 / infinity (NA / NA)	24.8859 ppm (PASS)	0.0000 ppm	0%	2018/03/08 00:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	24.0 ppm	1	24.8859	248.8586	193.52	196.11	2.58	49.50	12:31

<u>Completion State</u>	<u>Success Action</u>	<u>Method</u>	<u>Calibration</u>	<u>STD Conc - Pos 2</u>
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)	24 ppmC

Sample Type: Sample

From Schedule Version 1

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time		
3	TOC	ICS	1.0004 ppm	0.0000 ppm	0.0000%	2018/03/08 01:03		
Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0004	10.0035	18.76	21.44	2.68	49.49	12:29
<u>Dilution</u>		<u>Blank Contribution</u>		<u>Method</u>	<u>Calibration</u>			
1:10		(TC) 11.4746 (IC) (v1092)		Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)			

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time		
4	TOC	LOD	0.6871 ppm	0.0000 ppm	0.0000%	2018/03/08 01:20		
Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6871	6.8715	16.48	19.09	2.61	49.51	12:31
<u>Dilution</u>		<u>Blank Contribution</u>		<u>Method</u>	<u>Calibration</u>			
1:10		(TC) 11.4746 (IC) (v1092)		Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)			

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
* 5	TOC	LOQ	0.9785 ppm	0.0000 ppm	0.0000%	2018/03/08 01:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9785	9.7852	18.60	21.43	2.83	49.49	12:31

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
* 6	TOC	K1802076-001.01 20x	6.2680 ppm	0.2011 ppm	3.2100%	2018/03/08 01:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.4102	64.1022	58.16	60.67	2.51	49.50	12:25
2	TOC	6.1259	61.2585	56.09	58.82	2.73	49.51	12:25

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
* 7	TOC	K1802076-001.01 ms 20x	32.1338 ppm	0.0000 ppm	0.0000%	2018/03/08 02:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	32.1338	321.3385	245.50	248.09	2.59	49.48	12:34

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
* 8	TOC	RB	0.6212 ppm	0.1206 ppm	19.4100%	2018/03/08 02:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7065	7.0651	16.62	19.29	2.67	49.46	12:24
2	TOC	0.5360	5.3597	15.38	18.13	2.75	49.46	12:26

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
* 9	TOC	K1802076-002.01 20x	2.9201 ppm	0.1087 ppm	3.7200%	2018/03/08 03:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9970	29.9697	33.30	35.94	2.64	49.48	12:25
2	TOC	2.8432	28.4319	32.18	34.96	2.78	49.45	12:23

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)Sample Type: Check Standard --> CCV 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦ B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	26.2584 ppm (PASS)	0.0000 ppm	0%	2018/03/08 03:44

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.2584	262.5841	203.52	206.19	2.67	49.48	12:28

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos B

50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦ D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.5395 ppm (PASS)	0.0000 ppm	0%	2018/03/08 04:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.5395	5.3945	16.22	18.91	2.70	49.48	12:33

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos D

0 ppmC

Sample Type: Sample

From Schedule Version 1

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
♦ 10	TOC	K1801755-008.05	0.5710 ppm	0.0082 ppm	1.4300%	2018/03/08 04:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5652	5.6522	15.59	18.25	2.66	49.47	12:30
2	TOC	0.5768	5.7675	15.68	18.38	2.70	49.47	12:24

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

♦ 11	TOC	K1801735-001.02 50x	2.8818 ppm	0.1366 ppm	4.7400%	2018/03/08 04:49
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Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9784	29.7844	33.17	35.88	2.71	49.47	12:29
2	TOC	2.7852	27.8524	31.76	34.61	2.85	49.44	12:27

<u>Dilution</u>	<u>Blank Contribution</u>	<u>Method</u>	<u>Calibration</u>
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
♦ 12	TOC	K1801735-001.02 ms 50x	29.2643 ppm	0.0000 ppm	0.0000%	2018/03/08 05:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.2643	292.6435	224.60	227.43	2.82	49.44	12:34

<u>Dilution</u>	<u>Blank Contribution</u>	<u>Method</u>	<u>Calibration</u>
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
♦ 13	TOC	K1802025-001.03	1.5957 ppm	0.1434 ppm	8.9900%	2018/03/08 05:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6971	16.9706	23.83	26.52	2.69	49.42	12:26
2	TOC	1.4943	14.9426	22.36	25.27	2.91	49.45	12:27

<u>Dilution</u>	<u>Blank Contribution</u>	<u>Method</u>	<u>Calibration</u>
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
♦ 14	TOC	K1802025-001.03 ms	27.0902 ppm	0.0000 ppm	0.0000%	2018/03/08 06:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.0902	270.9018	208.77	211.40	2.63	49.46	12:31

<u>Dilution</u>	<u>Blank Contribution</u>	<u>Method</u>	<u>Calibration</u>
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
♦ 15	TOC	K1802025-002.03	1.8372 ppm	0.1778 ppm	9.6800%	2018/03/08 06:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9629	19.6289	25.77	28.51	2.74	49.47	12:26
2	TOC	1.7115	17.1148	23.94	26.70	2.76	49.47	12:23

<u>Dilution</u>	<u>Blank Contribution</u>	<u>Method</u>	<u>Calibration</u>
1:10	(TC) 11.4746 (IC)	Extended Reaction	Extended Reaction

(v1092)

021711 (v3)

021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
16	TOC	K1802025-003.04	2.4519 ppm	0.0505 ppm	2.0600%	2018/03/08 06:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4876	24.8756	29.59	32.36	2.76	49.47	12:26
2	TOC	2.4162	24.1615	29.07	31.82	2.74	49.47	12:26

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
17	TOC	K1801917-001.13	1.9230 ppm	0.0792 ppm	4.1200%	2018/03/08 07:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0240	20.2400	26.22	28.98	2.76	49.51	12:25
2	TOC	1.9475	19.4752	25.66	28.27	2.61	49.49	12:26
3	TOC	1.8690	18.6897	25.09	27.80	2.72	49.54	12:27
4	TOC	1.8515	18.5154	24.96	27.70	2.74	49.51	12:24

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
18	TOC	K1801917-001.13 ms	27.8032 ppm	0.0000 ppm	0.0000%	2018/03/08 08:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.8032	278.0323	213.96	216.75	2.79	49.50	12:34

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
19	TOC	RB	0.5747 ppm	0.1258 ppm	21.9000%	2018/03/08 08:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6637	6.6367	16.31	18.98	2.67	49.48	12:24
2	TOC	0.4857	4.8572	15.01	17.78	2.76	49.52	12:28

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Sample Type: Check Standard --> CCV 021711

From Schedule Version 1

	Type								
2	TOC	24.0 ppm	1	24.7811	247.8109	192.76	195.43	2.67	49.52 12:31

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos 2

24 ppmC

Sample Type: Sample

From Schedule Version 1

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
21	TOC	K1801917-002.13	2.8100 ppm	0.1113 ppm	3.9600%	2018/03/08 10:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9729	29.7295	33.13	35.87	2.75	49.52	12:28
2	TOC	2.7590	27.5902	31.57	34.35	2.78	49.54	12:24
3	TOC	2.7839	27.8387	31.75	34.40	2.65	49.55	12:23
4	TOC	2.7243	27.2428	31.32	34.10	2.78	49.56	12:25

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
22	TOC	K1801917-003.13	2.3972 ppm	0.0819 ppm	3.4200%	2018/03/08 11:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4834	24.8344	29.56	32.25	2.69	49.56	12:28
2	TOC	2.4254	24.2535	29.14	31.74	2.60	49.59	12:25
3	TOC	2.3920	23.9199	28.90	31.52	2.62	49.58	12:27
4	TOC	2.2882	22.8818	28.14	31.01	2.87	49.57	12:24

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
23	TOC	K1801917-004.13	2.0516 ppm	0.0355 ppm	1.7300%	2018/03/08 12:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0627	20.6272	26.50	29.29	2.79	49.59	12:23
2	TOC	2.0019	20.0189	26.05	28.78	2.73	49.57	12:26
3	TOC	2.0856	20.8565	26.66	29.41	2.75	49.62	12:27
4	TOC	2.0563	20.5626	26.45	29.21	2.76	49.60	12:26

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
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• 24	TOC	K1801917-005.13	1.2514 ppm	0.0295 ppm	2.3600%	2018/03/08 13:34
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Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2827	12.8266	20.82	23.69	2.87	49.66	12:24
2	TOC	1.2523	12.5232	20.60	23.35	2.75	49.63	12:26
3	TOC	1.2117	12.1167	20.30	23.10	2.80	49.65	12:25
4	TOC	1.2589	12.5891	20.64	23.37	2.73	49.63	12:26

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
• 25	TOC	K1801917-006.13	1.8765 ppm	0.0480 ppm	2.5600%	2018/03/08 14:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9151	19.1511	25.42	28.07	2.64	49.63	12:26
2	TOC	1.8180	18.1803	24.72	27.69	2.98	49.63	12:26
3	TOC	1.9163	19.1635	25.43	28.18	2.75	49.62	12:27
4	TOC	1.8565	18.5648	24.99	27.71	2.71	49.65	12:23

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
• 26	TOC	K1801917-007.13	1.9501 ppm	0.0477 ppm	2.4400%	2018/03/08 15:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9902	19.9022	25.97	28.68	2.71	49.61	12:26
2	TOC	1.9718	19.7182	25.84	28.56	2.72	49.61	12:26
3	TOC	1.9566	19.5658	25.72	28.42	2.70	49.63	12:27
4	TOC	1.8816	18.8161	25.18	28.02	2.84	49.66	12:25

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
• 27	TOC	RB	0.4947 ppm	0.0384 ppm	7.7500%	2018/03/08 16:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4676	4.6759	14.88	17.70	2.82	49.64	12:26
2	TOC	0.5218	5.2183	15.28	18.10	2.82	49.67	12:22

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
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28	TOC	K1802038-001.02	5.2576 ppm	0.0278 ppm	0.5300%	2018/03/08 17:14		
Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.2773	52.7728	49.91	52.65	2.75	49.65	12:28
2	TOC	5.2380	52.3801	49.62	52.61	2.98	49.64	12:21
<u>Dilution</u>		<u>Blank Contribution</u>		<u>Method</u>	<u>Calibration</u>			
1:10		(TC) 11.4746 (IC) (v1092)		Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)			

Sample Type: Check Standard --> CCV 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
• B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	25.7552 ppm (PASS)	0.0000 ppm	0%	2018/03/08 17:46

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7552	257.5517	199.86	202.54	2.68	49.62	12:32

Completion State

Success - Criteria met.

Success Action

Do Nothing

Method

Extended Reaction 021711 (v3)

Calibration

Extended Reaction 021711 (v16)

STD Conc - Pos B

50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 1

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦ D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.4978 ppm (PASS)	0.0000 ppm	0%	2018/03/08 18:02

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.4978	4.9785	15.91	18.74	2.82	49.60	12:33

Completion State

Success - Criteria met.

Success Action

Do Nothing

Method

Extended Reaction 021711 (v3)

Calibration

Extended Reaction 021711 (v16)

STD Conc - Pos D

0 ppmC

Sample Type: Sample

From Schedule Version 1

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
29	TOC	K1802038-001.02 ms	31.0918 ppm	0.0000 ppm	0.0000%	2018/03/08 18:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	31.0918	310.9180	237.91	240.71	2.80	49.60	12:30

Dilution

Blank Contribution

Method

Calibration

1:10 (TC) 11.4746 (IC) Extended Reaction Extended Reaction
(v1092) 021711 (v3) 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
30	TOC	RB	0.5962 ppm	0.1170 ppm	19.6200%	2018/03/08 18:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6789	6.7891	16.42	19.31	2.89	49.63	12:29
2	TOC	0.5135	5.1345	15.21	18.17	2.96	49.61	12:26

Dilution 1:10 Blank Contribution (TC) 11.4746 (IC) (v1092) Method Extended Reaction 021711 (v3) Calibration Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
31	TOC	FB 3/5/18	0.5766 ppm	0.0600 ppm	10.4100%	2018/03/08 19:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6190	6.1904	15.98	18.80	2.82	49.58	12:24
2	TOC	0.5342	5.3419	15.36	18.11	2.75	49.59	12:22

Dilution 1:10 Blank Contribution (TC) 11.4746 (IC) (v1092) Method Extended Reaction 021711 (v3) Calibration Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
32	TOC	K1802006-001 doc 4x	15.5975 ppm	0.1827 ppm	1.1700%	2018/03/08 19:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.4683	154.6828	124.13	126.72	2.59	49.59	12:24
2	TOC	15.7267	157.2669	126.01	128.70	2.69	49.50	12:25

Dilution 1:10 Blank Contribution (TC) 11.4746 (IC) (v1092) Method Extended Reaction 021711 (v3) Calibration Extended Reaction 021711 (v16)

Sample Type: Sample

From Schedule Version 3

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
33	TOC	RB	1.0489 ppm	0.2178 ppm	20.7600%	2018/03/08 20:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2029	12.0288	20.24	22.66	2.42	49.42	12:25
2	TOC	0.8949	8.9490	17.99	20.48	2.49	49.47	12:28

Dilution 1:10 Blank Contribution (TC) 11.4746 (IC) (v1092) Method Extended Reaction 021711 (v3) Calibration Extended Reaction 021711 (v16)

Analysis	Std. Dev.
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Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
34	TOC	K1802006-002 doc	2.1143 ppm	0.1566 ppm	7.4100%	2018/03/08 20:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.2250	22.2502	27.68	30.15	2.47	49.55	12:30
2	TOC	2.0035	20.0354	26.07	28.84	2.78	49.59	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
35	TOC	K1802006-002 ms doc	27.7226 ppm	0.0000 ppm	0.0000%	2018/03/08 21:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.7226	277.2263	213.37	216.01	2.64	49.61	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
36	TOC	K1801267-008.10 doc	5.9968 ppm	0.1009 ppm	1.6800%	2018/03/08 21:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.9820	59.8195	55.04	57.88	2.84	49.60	12:24
2	TOC	5.8600	58.6002	54.15	57.04	2.88	49.67	12:27
3	TOC	6.0814	60.8137	55.76	58.54	2.78	49.63	12:24
4	TOC	6.0638	60.6379	55.64	58.58	2.94	49.61	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Sample Type: Sample

From Schedule Version 5

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
37	TOC	K1801267-017.04 doc	8.2933 ppm	0.1552 ppm	1.8700%	2018/03/08 22:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.3673	83.6730	72.41	75.18	2.77	49.57	12:26
2	TOC	8.3959	83.9586	72.62	75.48	2.86	49.57	12:26
3	TOC	8.3477	83.4766	72.27	75.23	2.96	49.62	12:27
4	TOC	8.0623	80.6233	70.19	73.18	2.99	49.59	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Sample Type: Sample

From Schedule Version 6

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
38	TOC	RB	1.5569 ppm	0.3613 ppm	23.2000%	2018/03/08 23:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8124	18.1240	24.67	27.40	2.72	49.58	12:25
2	TOC	1.3015	13.0147	20.95	23.84	2.89	49.57	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 11.4746 (IC) (v1092)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)

Sample Type: Check Standard --> CCV 021711

From Schedule Version 6

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	26.1031 ppm (PASS)	0.0000 ppm	0%	2018/03/09 00:08

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.1031	261.0311	202.39	205.22	2.83	49.63	12:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)	50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 6

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.7491 ppm (PASS)	0.0000 ppm	0%	2018/03/09 00:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.7491	7.4913	17.74	20.49	2.75	49.59	12:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)	0 ppmC

Sample Type: Sample

From Schedule Version 6

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
39	TOC	K1801267-017.04 ms doc	22.9106 ppm	0.0000 ppm	0.0000%	2018/03/09 00:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.9106	229.1061	178.33	181.05	2.72	49.59	12:33

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
40	TOC	RB	0.9589 ppm	0.3365 ppm	35.1000%	2018/03/09 00:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1968	11.9684	20.19	22.84	2.64	49.60	12:27
2	TOC	0.7209	7.2093	16.72	19.44	2.72	49.58	12:24

Dilution

1:10

Blank Contribution(TC) 11.4746 (IC)
(v1092)MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)

Sample Type: Check Standard --> CCV 021711

From Schedule Version 6

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	25.8002 ppm (PASS)	0.0000 ppm	0%	2018/03/09 01:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.8002	258.0021	200.18	202.77	2.59	49.58	12:29

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos B

50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 6

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.7083 ppm (PASS)	0.0000 ppm	0%	2018/03/09 01:45

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.7083	7.0835	17.44	20.08	2.63	49.55	12:29

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)CalibrationExtended Reaction
021711 (v16)STD Conc - Pos D

0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1091	1.7313	1.2820	0.0000	0.0000	0.0000	2018/03/07 20:39	Fusion1 (Fusion1)
v1092	2.0850	1.7200	0.0000	0.0000	0.0000	2018/03/07 23:41	Fusion1 (Fusion1)

Calibrations

Name: Extended Reaction 021711 (TOC)

Version: v16 Calibration curve formula: TOC: $y = 7.283x + 12.286$

Ver Creation: 2017/07/24 23:31 r^2 value: TOC: $r^2 = 0.99991$

Comment:

Operator: Fusion1 (Fusion1)

Basic Analysis Type TOC

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
0.0 ppm	12.1780	0.0000		2017/07/24 21:53
0.50 ppm	15.5530	0.5000		2017/07/24 22:09
1.00 ppm	18.9640	1.0000		2017/07/24 22:25
5.00 ppm	49.8650	5.0000		2017/07/24 22:41
10.0 ppm	83.7530	10.0000		2017/07/24 22:58
25.0 ppm	196.5820	25.0000		2017/07/24 23:13
50.0 ppm	375.4850	50.0000		2017/07/24 23:29

Methods

Name: Extended Reaction 021711 (TOC)

Version: v3 Operator: Gen Chem Lab (Fusion1)

Ver Creation: 2013/02/04 11:44

Comment:

Parameter	Value	Advanced Parameter	Value
SampleVolume	10.0 mL	NeedleRinseVolume	5.0 ml
Dilution	1:10	VialPrimeVolume	2.0 ml
AcidVolume	0.5 ml	ICSamplePrimeVolume	2.0 ml
ReagentVolume	2.0 ml	ICSpurgeRinseVolume	12.0 ml
UVReactorPrerinse	Off	BaselineStabilizeTime	0.70 min
UVReactorPrerinseVolume	5.0	DetectorPressureFlow	150 ml/min
NumberOfUVReactorPrerinses	1	SyringeSpeedWaste	10
ICSpurgeTime	1.00 mins	SyringeSpeedAcid	7

DetectorSweepFlow	500 ml/min	SyringeSpeedReagent	7
PreSpurgeTime	4.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	7
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	7
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date
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Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2018/03/09 02:03

Fusion Report - 03072018

Wednesday, March 07, 2018 06:04 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2018/03/12 14:45 - Monday

Report Summary Information

Company Location: Gen Chem Lab
Schedule Name: 03072018
Instrument Name: Fusion1
Report Version: 1 of 1
Report Creation by Operators (schedule version): Fusion1 (Fusion1) (v2)
Fusion1 (Fusion1) (v3)
Fusion1 (Fusion1) (v4)
Comment:

Engine Version: 1.1.5.1
Firmware Version: 1.2.0696
Connection: RS232 COM1

Report Results

Sample Type: Clean

From Schedule Version 2

	Pos	Analysis Type	Sample ID			Start Time
♦	(clean)		Clean			2018/03/07 18:04
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.00	17.22	4.22	47.56	07:59
2	TC Clean	6.30	8.87	2.57	49.54	07:15
3	TC Clean	2.21	5.04	2.83	49.50	06:58
4	TC Clean	1.74	4.52	2.78	49.54	07:01

Sample Type: Clean

From Schedule Version 3

	Pos	Analysis Type	Sample ID			Start Time	
♦	(clean)		Clean			2018/03/07 18:39	
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time	
1	IC Clean	13.55	16.14	2.59	46.88	07:57	
2	TC Clean	4.11	6.77	2.66	49.55	07:17	
3	TC Clean	2.04	4.82	2.78	49.56	07:01	
4	TC Clean	1.51	4.23	2.72	49.51	07:03	

Sample Type: Clean

From Schedule Version 4

Pos	Analysis Type	Sample ID			Start Time	
♦ (clean)		Clean			2018/03/07 19:13	
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.79	3.37	2.58	46.76	07:59
2	TC Clean	3.71	6.30	2.59	49.59	07:17
3	TC Clean	1.71	4.42	2.72	49.53	07:01
4	TC Clean	1.64	4.34	2.70	49.57	07:02

Sample Type: Blank (Creating v1091)

From Schedule Version 4

Pos	Analysis Type	Sample ID			Start Time	
♦ (blank)		Reagent/Acid Blank			2018/03/07 19:47	
Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.64	3.27	2.64	46.67	07:58
2	TC Clean	3.84	6.51	2.68	49.53	07:15
3	TC Clean	2.05	4.76	2.72	49.48	07:02
4	TC Clean	1.79	4.60	2.81	49.52	07:04
5	Reagent Blank	5.19	7.77	2.58	49.52	08:11
6	Acid Blank	1.28	3.88	2.59	46.42	08:04

Sample Type: Sample

From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time		
◆	D	TOC	RB	0.8003 ppm	0.0000 ppm	0.0000%	2018/03/07 20:39		
Rep #	Base Analysis Type		ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC		0.8003	8.0026	17.23	19.90	2.67	49.60	12:33
<u>Dilution</u>		<u>Blank Contribution</u>		<u>Method</u>	<u>Calibration</u>				
1:10		(TC) 11.4039 (IC) (v1091)		Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)				

Sample Type: Check Standard --> CCV 021711

From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	25.9985 ppm (PASS)	0.0000 ppm	0%	2018/03/07 20:55

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.9985	259.9848	201.63	204.29	2.66	49.59	12:33

<u>Completion State</u>	<u>Success Action</u>	<u>Method</u>	<u>Calibration</u>	<u>STD Conc - Pos B</u>
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)	50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.3914 ppm (PASS)	0.0000 ppm	0%	2018/03/07 21:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.3914	3.9143	15.14	17.97	2.84	49.58	12:34

<u>Completion State</u>	<u>Success Action</u>	<u>Method</u>	<u>Calibration</u>	<u>STD Conc - Pos D</u>
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v16)	0 ppmC

Sample Type: Sample

From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time		
◆	1	TOC	MB1	0.4141 ppm	0.0000 ppm	0.0000%	2018/03/07 21:29		
Rep #	Base Analysis Type		ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC		0.4141	4.1414	14.42	17.20	2.78	49.57	12:34
Dilution		Blank Contribution		Method		Calibration			
1:10		(TC) 11.4039 (IC) (v1091)		Extended Reaction 021711 (v3)		Extended Reaction 021711 (v16)			

Sample Type: Check Standard --> LCS ER

From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
♦	2	TOC	24.0000	1:1	[TOC] LCS ER [24.0 ppm]	0 / infinity (NA / NA)	51.1134 ppm (FAIL)	0.0000 ppm	0%	2018/03/07 21:45

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
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Type										
2	TOC	24.0 ppm	1	51.1134	511.1341	384.54	387.09	2.55	49.51	12:32

Completion State

Success - Criteria met.

Success Action

Do Nothing

MethodExtended Reaction
021711 (v3)**Calibration**Extended Reaction
021711 (v16)**STD Conc - Pos 2**

24 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1090	1.6490	1.1890	0.0000	0.0000	0.0000	2018/03/05 20:03	Fusion1 (Fusion1)
v1091	1.7313	1.2820	0.0000	0.0000	0.0000	2018/03/07 20:39	Fusion1 (Fusion1)

Calibrations

Name: Extended Reaction 021711 (TOC)

Version: v16 Calibration curve formula: TOC: $y = 7.283x + 12.286$

Ver Creation: 2017/07/24 23:31 r^2 value: TOC: $r^2 = 0.99991$

Comment:

Operator: Fusion1 (Fusion1)

Basic Analysis Type: TOC

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
0.0 ppm	12.1780	0.0000		2017/07/24 21:53
0.50 ppm	15.5530	0.5000		2017/07/24 22:09
1.00 ppm	18.9640	1.0000		2017/07/24 22:25
5.00 ppm	49.8650	5.0000		2017/07/24 22:41
10.0 ppm	83.7530	10.0000		2017/07/24 22:58
25.0 ppm	196.5820	25.0000		2017/07/24 23:13
50.0 ppm	375.4850	50.0000		2017/07/24 23:29

Methods

Name: Extended Reaction 021711 (TOC)

Version: v3 Operator: Gen Chem Lab (Fusion1)

Ver Creation: 2013/02/04 11:44

Comment:

Parameter	Value	Advanced Parameter	Value
SampleVolume	10.0 mL	NeedleRinseVolume	5.0 ml
Dilution	1:10	VialPrimeVolume	2.0 ml
AcidVolume	0.5 ml	ICSamplePrimeVolume	2.0 ml
ReagentVolume	2.0 ml	ICSpurgeRinseVolume	12.0 ml
UVReactorPrerinse	Off	BaselineStabilizeTime	0.70 min
UVReactorPrerinseVolume	5.0	DetectorPressureFlow	150 ml/min
NumberOfUVReactorPrerinses	1	SyringeSpeedWaste	10
ICSpurgeTime	1.00 mins	SyringeSpeedAcid	7
DetectorSweepFlow	500 ml/min	SyringeSpeedReagent	7
PreSpurgeTime	4.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	7
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	7
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date
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Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2018/03/07 22:02